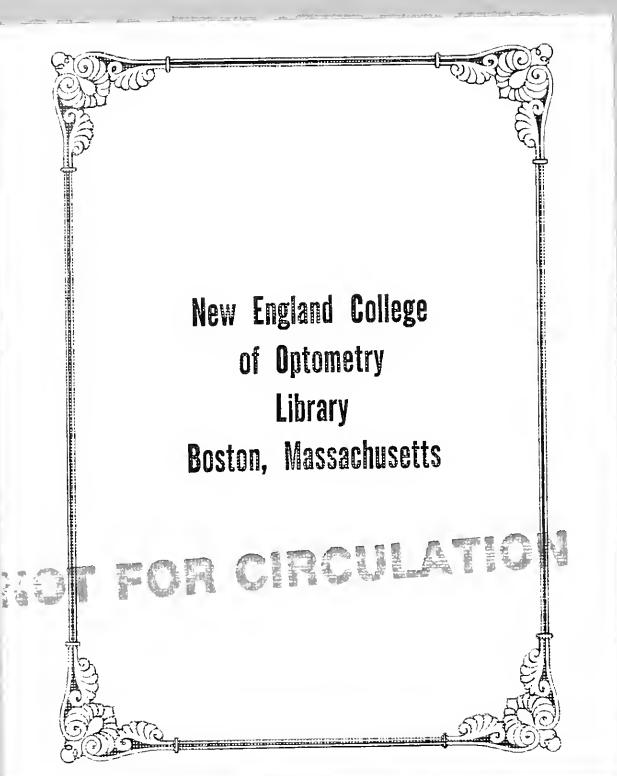


BULLETIN
OF THE
MASSACHUSETTS
SCHOOL OF OPTOMETRY

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BULLETIN

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BOSTON, MASSACHUSETTS

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GENERAL INFORMATION

OPTOMETRY, THE PROFESSION

Out of the ancient art of spectacle-fitting grew what is now well established as the science and profession of OPTOMETRY.

Long before that name was invented, men were adapting lenses to the correction of the simpler visual defects. They knew little if anything of anatomy or physiology, and less of pathology. They were not looked upon as professional men nor as being in any way identified with the healing arts, but were held to be superior craftsmen of a sort skilled in the fitting of spectacles.

To them, vision was a matter of the laws of optics, and their function was to measure its range. This idea of the MEASUREMENT OF VISION was preserved in the word, OPTOMETRY, which came into use during the first decade of the present century, that being its literal meaning.

That OPTOMETRY is the profession dedicated to the preservation of human vision is amply proven by the history of its development to its present-day status. One of the first tasks of organized Optometry was to secure the enactment of the various Optometry Laws which are designed to safeguard the public from irresponsible and unqualified individuals and to insure that those desiring to practice Optometry should be adequately trained and prepared to serve the visual needs of the people. As a result of the enactment of such Laws, the cause of the conservation of human vision has been greatly advanced.

(The status of Optometry is best told by Dr. E. E. Arrington in his "History of Optometry".)

We quote here briefly:—

"Optometry is not the practice of medicine in any of its branches or any spurious imitation of it. It did not spring from medicine nor is it allied with its history or traditions. It has a long and honorable ancestry of its own. * * * Its lineage does not lie through pathology and pharmacology, but through physics, mathematics, and optics. Optometry is, in short, by its tradition and development a specialty in optical science, in that branch of it known as physiological optics, giving optical service for the aid of vision in the healthy eye. * * * It has a distinctive and honorable prestige, in a branch of applied science all its own, where it is without rival, in which the Optometrist is as justly esteemed as the Dentist in Dentistry, the Chemist in Chemistry, the Lawyer in Law, or the Physician in Medicine."

In all walks of life the helpful influence of optometric service is felt. Everywhere workers are enabled, through Optometry, to extend their working lives, to conserve their nervous energy, to prevent many serious disorders, in short, to "Be More Successful with Better Vision."

The word "OPTOMETRY" comes from the Greek, "opto," meaning "eye," and "metro," meaning "to measure." Its pronunciation is Op-tom-et-ry (like geometry).

Optometrists use and prescribe physical agencies such as lenses, prisms, ocular exercises, etc., for the purpose of correcting optical defects of the eyes, improving the balance of the ocular muscles, the removal of eye-strain, the relief of defective vision, and the promotion of visual efficiency.

Optometry requires the knowledge of a variety of subjects which are not a part of medical training; Optometry is not taught in Medical Schools nor is it covered by the state examinations of physicians. Optometry is taught in several universities and in independent Optometry Schools.

OPTOMETRY, DEFINED AND EXPLAINED

That Optometry, as a profession, has made unprecedented advance-

ment and is now recognized as a specialized work requiring highly specialized training there can be no doubt. It offers to the qualified young person an opportunity to engage in a profession that promises a real career of service to humanity and one that is stimulating to the "science minded."

Every state in the Union, the District of Columbia, Canadian Provinces, and several foreign countries recognize Optometry as a separate and distinct profession having laws which govern the licensing and practice of Optometrists.

The Massachusetts School of Optometry is a non-profit institution and was established as co-educational in 1894. It is located in an educational center with excellent opportunities for clinical experience. The laboratories are supplied with modern equipment for teaching and research.

The course of instruction extends over four academic years and is planned to emphasize the general training of the student for the practice of Optometry. The number of students in the various classes is limited in order to insure proper instruction and to permit a full utilization of facilities.

LIBRARIES

Library facilities are ample, inasmuch as the students have access not only to the school library, but also to the Boston Medical Library and the Boston Public Library. The Boston Medical Library is one of the largest of its kind in the United States, and students of this school may avail themselves of the opportunity for quiet study therein.

REQUIREMENTS FOR ADMISSION

Matriculant shall have completed a four-year course of at least sixteen units in an approved high school or secondary school, or have the equivalent as determined by examination to be conducted by the authorized examiner of a standard college or university approved by the Council on Optometric Education or by a State Examination Board.

The subjects required as part of an approved high school course are:

English	4 years
Algebra	1 year
Geometry	1 year
History	1 year
Laboratory Science	1 year

The balance of the units may be made from any other high school subjects in which credit is given.

All students desiring to enter are required to submit an application upon a form provided by the school. This application must be accompanied by an application fee of \$3.00. Upon notification of acceptance the applicant is required to make a deposit of \$10.00 to insure a place in the class to which entrance is sought. This deposit is credited to the first semester's tuition upon completion of matriculation.

ADVANCED STANDING

Advanced standing is granted to all applicants who have completed at least one year of study at an approved university or college in the major subjects of the Freshman year. Such standing is likewise granted to applicants who have completed the necessary entrance requirements and have covered the Freshmen subjects in an approved Optometry institution.

Applicants for such advanced standing must demonstrate to the heads of departments in those courses for which they seek credit that their qualifications are satisfactory in every respect. In each instance a personal interview is necessary before final acceptance.

MARKING SYSTEM

The grade marks given are: A—Excellent; B—Good; C—Average; D—Lowest Passing; F—Failed.

A student is required to have an average of "C" for graduation. For purposes of computation, letter grades are converted into numerical equivalents and a factor system is used to determine the relative im-

portance of each course and to arrive at an average grade for the year. The mere attainment of passing grades does not insure advancement or continuation in the School.

Re-examination will be permitted for the removal of deficiencies only in those cases approved by the Dean. A fee of \$2.00 will be charged for each special examination. Within one week after the date on which the examination was scheduled, a student must make a written request to the Dean of the School setting forth the reasons why the privilege of a special examination should be granted.

The right is reserved to dismiss a student at any time or to refuse recommending him for advancement or graduation.

RULES AND REGULATIONS

It is the aim of this institution to develop in the individual student the sense of personal responsibility for good order and for respect of the rights of others, and to secure in the largest measure his co-operation with the Faculty and the Student Body in the development of his own character.

In the exercise of academic discipline, the student's conduct outside as well as inside the school will be taken into consideration.

The continuance in good standing of any student is dependent upon the satisfactory fulfillment of the rules and regulations of the School, as well as the observance of such moral standards as are deemed fitting for one preparing for the practice of Optometry.

The School reserves the right to cancel his registration at any time on any grounds it deems advisable.

ATTENDANCE

It is a student's duty to attend punctually each class or laboratory exercise in each course. Tardiness counts half an absence. A student may be absent without penalty in a session as follows: from a course

meeting once weekly, twice; from a course meeting twice weekly, three times; from a course meeting three times weekly, five times; from a course meeting four times weekly, six times; from a course meeting five times weekly, seven times; from a course meeting six times weekly, eight times. Each student is responsible for keeping a record of the date of each absence or lateness and the reason therefor. In case this limit is exceeded, a student may at the end of the course submit a statement showing the cause of each absence. On the recommendation of the Committee on Instruction, full or partial credit may be assigned in accordance with the extent and reasons of the absences and the standing attained.

Students are held accountable for absences incurred owing to late enrollment.

~~Schedule of Fees~~ **TUITION AND FEES**

The total cost of tuition, all laboratory fees, student fee, medical fee, school paper fee, and library fee is \$375 for each year. Diploma fee is \$15.

LABORATORY BREAKAGE

The laboratory fees do not cover charges for breakage or waste of materials nor for any damage to the school property. This will be charged to the student who is responsible for this breakage or damage, or in any case where the responsibility cannot be placed on any one person, it will be charged to the group as a whole.

TRANSCRIPT OF RECORD

A student may receive one certified transcript of his record without charge. For each transcript after the first, a charge of \$1.00 will be made. Requests for transcripts should be made in writing at least one week in advance of date desired. No transcripts will be issued during the busy season.

SPECIAL FEES

An additional charge of \$5.00 will be made to students who have

not paid their tuition, or who have not made satisfactory arrangements on or before the day set for the payment of tuition.

The late registration fee of \$3.00 is charged to students who register after the specified registration dates.

Special fees are not returnable in the event of a student severing his connection with the school.

Students are not permitted to attend classes until they have registered and have paid their tuition, or have made satisfactory arrangements therefor.

Students who are permitted to do partial work are charged on the basis of the amount of work undertaken.

REFUNDS

The School assumes the obligation of carrying the student throughout the year.

Instruction and accommodations are provided on a yearly basis; therefore no refunds are granted except in cases where students are compelled to withdraw on account of personal illness.

No grades are issued until all financial obligations to the school are discharged.

The Directors of the School reserve the right to change tuition rates and to make additional charges for special features and services whenever in their discretion such action is deemed advisable.

A student who withdraws from the school for good and sufficient reasons may be reinstated subsequently, provided not too long a time has elapsed, and provided further that changes in the curriculum do not render such re-admission impracticable.

All entering students are required to have a complete physical examination under the direction of the School Physician.

TEXTBOOKS AND EQUIPMENT

The latest editions of textbooks are required.

The minimum cost for new textbooks for the four years is \$120.

The minimum cost for new equipment for the four years is \$155.
This equipment includes:

A Diagnostic Set

Trial Frame

Practice Eye

Set of Tools for Optical Shop

Dissecting Set

Incidentals such as:

Laboratory note books

Drawing material

Record and Experiment sheets

Small accessories for Optometry and Optics

Laboratories

Clinical Uniforms

The cost of the textbooks and equipment is subject to change according to the cost of production.

All students are required to purchase new textbooks and new equipment.

The textbooks provide the nucleus for a professional library.

Practically all of the equipment can be used in professional practice after graduation.

The Faculty reserves the right to make such additions and changes in the list of the prescribed books and equipment as are deemed advisable.

CURRICULUM

FIRST YEAR

General Chemistry

4 hours lecture, 2 hours laboratory

Mathematics

5 hours lectures

General Physics

3 hours lecture, 2 hours laboratory

Zoology and Comparative Anatomy

4 hours lecture, 4 hours laboratory

SECOND YEAR

General Anatomy and Physiology

4 hours lecture, 2 hours laboratory

Ocular Anatomy and Histology

4 hours lecture, 2 hours laboratory

General Pathology and Bacteriology

5 hours lecture, 2 hours laboratory

Physiological Chemistry

3 hours lecture, 2 hours laboratory

Geometrical Optics

3 hours lecture, 2 hours laboratory

Practical Optics

3 hours lecture, 2 hours laboratory

THIRD YEAR

Ocular Pathology

2 hours lecture, 1 hour laboratory

Physiological Optics

4 hours lecture, 2 hours laboratory

Practical Optics

3 hours lecture, 2 hours laboratory

Geometrical Optics

3 hours lecture, 2 hours laboratory

Theoretic Optometry

4 hours lecture

Practical Optometry

6 hours laboratory under supervision of clinical staff

Clinical Practice

Each student is required to complete two weeks Clinical Practice between the Junior and Senior years. This is covered during the six weeks' summer recess.

FOURTH YEAR

Ocular Pathology

2 hours lecture, 1 hour laboratory

Physiological Optics

3 hours lecture, 2 hours laboratory

Practical Optics

3 hours lecture, 2 hours laboratory

Theoretic Optometry

4 hours lecture

Clinical Conference

5 hours lecture

Public Health Optometry

1 hour lecture

Optometric Jurisprudence

1 hour lecture

Clinical Practice

10 hours laboratory under supervision of clinical staff

In addition to the regular day clinics all members of the graduating class are held responsible to be called for duty in special evening clinics at various places. There is no exact number of hours scheduled for each student, but each is required to supply a substitute in case of illness on his part.

OUTLINE OF COURSES

GEOMETRICAL OPTICS

Second Year

GEOMETRICAL OPTICS I. This course follows the course in General Physics, since a general knowledge of physics is an indispensable preparation for a detailed study of Geometrical Optics. The following subject matter is covered in the course: photometry, shadows, reflection and refraction at plane and spherical surfaces, compound reflecting systems, infinitely thin lenses.

GEOMETRICAL OPTICS LABORATORY I. This course is to accompany Geometrical Optics I. Elementary laboratory exercises and demonstrations to supplement and illustrate classroom lectures. The following subject matter is covered: investigation of the laws of reflection and refraction; determination of the index of refraction by several methods; use of simple optical bench. Lathe type optical benches, refraction troughs, and optical discs are used for demonstrations.

Third Year

GEOMETRICAL OPTICS II. A continuation of Geometrical Optics I. This course includes: equivalence of thin lenses, optical instruments, entrance and exit pupils, resolving and magnifying power of instruments, thick lenses, thin and thick compound systems, thin and thick prisms, achromatic and aplanatic systems.

GEOMETRICAL OPTICS LABORATORY II. This course is to accompany Geometrical Optics II. A series of more advanced experiments designed to illustrate classroom lectures. This work includes: experiments on thin lenses in combination, construction of model optical instruments, combination of lenses and plane or spherical mirrors, thick lenses, thin and thick prisms.

PRACTICAL OPTICS

Second Year

PRACTICAL OPTICS I. This course is given in two parts, the first being the regular classroom lectures and the second, laboratory exercises to supplement the classroom work. This course includes: history and manufacture of various types of glass; construction of all types of simple lenses in chronological

sequence; simple prisms; decentration; simple lens marking; simple surface grinding and edging.

PRACTICAL OPTICS LABORATORY I. This course is given to supplement Practical Optics I. It covers the same material and serves to enlarge on and illustrate the material given in class.

Third Year

PRACTICAL OPTICS II. A continuation of Practical Optics I. This course consists of both classroom work and a supplementary laboratory course. The material covered includes: surface grinding, centering, axis marking, cutting, edging, neutralizing, decentering, prism work; imbalances, obliquely crossed prisms, frame fitting including all types of modern mountings; theory of special instruments such as Axometer, Vertometer, Lens Measure, Colmascope, etc.

PRACTICAL OPTICS LABORATORY II. This course is to accompany Practical Optics II, being the supplementary laboratory course. This course serves to enlarge on and emphasize certain points stressed in lectures as well as to give the student practical experience in the optical shop. The use of certain instruments such as Axometer, Vertometer, Lens Measure, Colmascope, etc. is taught.

Fourth Year

PRACTICAL OPTICS III. A continuation of Practical Optics II. This course consists of classroom lectures and the practical application of the material so taught in the optics laboratory. The material covered includes: bridge bending and adjusting; prescription writing; making up of complete Rx jobs; fitting bifocal lenses; advanced surface grinding, drilling, mounting, etc.; corrected lenses; tinted and protection lenses; cataract and special lenses; modern bifocals and trifocals.

PRACTICAL OPTICS LABORATORY III. This course is to accompany Practical Optics III. The laboratory course gives a practical application of the work given in the classroom. Advanced optical shop work is taught.

THEORETIC OPTOMETRY

Third Year

THEORETIC OPTOMETRY I. This course includes: history of Optometry; value of optometry to mankind; nomenclature; description of various

test-cards and projecting devices used in the measure of vision at distance and near; use of the ophthalmoscope, supplemented by a large variety of projection slides illustrating physiologic and pathologic variations from normal fundi (fundi descriptions are guided by a suitably arranged outline as well as required drawings of the fundi examined); subjective refraction including the use of the various astigmatic charts, stenopalic-slit, swinging axis test, and pin-hole disc; chrom-optometry, discussing the principles and clinical application of devices designed for making this check-test; contents of the trial case; the phorometer and trial-frame; ophthalmometry including the various devices, their purpose and clinical application as well as their clinical limitations; a review of historic remarks in connection with the development of objective refraction by static skiametric methods; static prism-skiametry. The course also includes: objective refraction by dynamic skiametric methods including the principle, methods of application, and clinical interpretation of results; the various forms of ametropia are explained from a viewpoint of etiology, characteristics, diagnosis and treatment, including hyperopia, myopia, astigmatism, anisometropia, aphakia, and presbyopia.

THEORETIC OPTOMETRY LABORATORY I. This course is given in connection with Theoretic Optometry I. The purpose of the course is to supplement the work given in the classroom and to familiarize the student with certain apparatus. Emphasis is placed on ophthalmoscopy and schematic eye refraction.

Fourth Year

THEORETIC OPTOMETRY II. A continuation of Theoretic Optometry I. The course includes: extra-ocular muscle studies including versions, rotations, field of fixation measurement, near-point of convergence, nomenclature and terminology, methods of testing for muscle imbalances employing all recognized devices, etiology and treatment of imbalances, fusional and stereopsis tests. A comprehensive course in the relationship of accommodation to convergence is given as well as the treatment for imbalances in this relationship; amplitudes of accommodation and convergence, insufficiencies of reserves and their corrections are also discussed. The etiology, diagnosis, and treatment of strabismus stressing particularly orthoptic methods of treating this condition. Cross-cylinders are introduced for the purpose of checking the cylindrical portion of the correction, measuring the presbyopic correction, unfused crossed-cylinder test, and binocular dynamic crossed-cylinder test. Special work is taken up in the transilluminator, slit-lamp, ophthalmograph, metronoscope, adaptometer, glareometer, subnormal

vision aids, and malingering tests. A comprehensive course in external examining of eye and appendages is given, with the view of detecting cases requiring medical care.

VISUAL FIELD STUDY

Fourth Year

VISUAL FIELD STUDY. This course includes a review of ocular anatomy; visual neurology; ocular physiology including the three phases of vision (physiological, physical, and psychological), corresponding retinal points, color vision, laws of projection and direction, central and peripheral visual acuity. General technique in plotting central, para-central, and peripheral fields is studied and applied to the various devices designed for this purpose. These devices include the perimeter, stereo-campimeter, and tangent screen. Normal form and color fields are described and discussed in preparation for the recognition of the abnormal. Factors influencing the normal fields. Various field defects are explained with the view of recognizing their pathologic significance.

CLINICAL CONFERENCE

Fourth Year

The conference periods are devoted to discussion and analysis of problems and various cases examined in the clinic. The aim of this course is to teach systematic analysis of anomalous conditions with special reference to etiology and corrective procedure. Case analysis is given special attention. Due to the wide variety of cases seen in the out-patient department of the clinic, case reports of all types are analyzed with the view of teaching the student the process of differential diagnosis.

GENERAL CHEMISTRY

First Year

GENERAL CHEMISTRY I. This is an introductory course in general chemistry for first year college students. The following topics are among those included in this course: the nature of matter and energy; the properties of gases, liquids, and solids; valence, equations, and calculations; the chemistry of metals; theory of ionization; an introduction to organic chemistry. Special attention is given to subject matter relating to optometrical studies.

GENERAL CHEMISTRY LABORATORY I. This course accompanies General Chemistry. In the laboratory experiments are made to illustrate the work given in the classroom.

PHYSIOLOGICAL CHEMISTRY

Second Year

PHYSIOLOGICAL CHEMISTRY. This is a course in advanced chemistry for second year students. The subject matter is selected in order to give the student a better understanding of human physiology and pathology. The following matter is included: an introduction to organic chemistry (in addition to that given in General Chemistry I); the chemistry of carbohydrates, proteins, and fats; tissues of the human body; urinalysis and various other physiological tests.

PHYSIOLOGICAL CHEMISTRY LABORATORY. This course accompanies Physiological Chemistry. Experiments are carried out to illustrate and supplement the work given in the classroom.

GENERAL PHYSICS

First Year

GENERAL PHYSICS I. This is a first year course in introductory college physics. The fundamentals of the following units of physics are included: the nature of matter and energy; the mechanics of gases, liquids, and solids; vectors; motion, gravitation, and force; light; magnetism; electricity; sound; radiation. Wherever possible, special consideration is given to subject matter related to optometrical science.

GENERAL PHYSICS LABORATORY I. This course is to accompany the course in General Physics. The course is designed to give the student a better understanding of certain physical properties which are of most importance in relation to his optometrical work. Experiments are designed to illustrate the classroom work.

GENERAL ZOOLOGY

First Year

GENERAL ZOOLOGY I. Representative vertebrate and invertebrate forms are studied with emphasis on comparative anatomy. An introduction to heredity, embryology, and organic evolution is given, and broad zoological principles are presented.

GENERAL ZOOLOGY LABORATORY I. This course accompanies General Zoology I. Microscopy and dissection are carried out by the student in the laboratory throughout the year.

MATHEMATICS

First Year

MATHEMATICS I. The first part of this course is a review of Secondary School mathematics to enable the student to be better prepared for his college work. Later in the year the study of Trigonometry is stressed. The mathematics is taught with the idea of giving the pupil a foundation for his work in optics.

GENERAL ANATOMY

Second Year

GENERAL ANATOMY I. This course includes the gross structure of the human body including the various organs and systems. The purpose of this course is to give the student a general knowledge of the anatomy of the body as a whole so that he will be better able to understand the functioning of certain specific parts

GENERAL ANATOMY LABORATORY I. This course is a supplement to General Anatomy I. In the laboratory the student has access to many charts and diagrams. Microscopical specimens are also introduced for study and detailed diagrams are required by the students.

OCULAR ANATOMY

Second Year

OCULAR ANATOMY I. This course covers the study of the eyeball and its appendages. It is necessary to be thoroughly familiar with the gross anatomy and histology of the eye and its appendages in preparation for the study of Ocular Pathology. The lectures are supplemented by charts, diagrams, and slides.

OCULAR ANATOMY LABORATORY I. This course is given to supplement the work covered in Ocular Anatomy I. In the laboratory the student is given an opportunity to study many slides under the microscope. Dissection of animals' eyes is required and students must submit drawings of all the work covered.

GENERAL PHYSIOLOGY

Second Year

GENERAL PHYSIOLOGY I. This is a study of the various organs and functions of the human body. Special attention is paid to the neuro-muscular mechanism. This course serves to give the students a picture of the correlation of the various functions of the body. Given in connection with General Anatomy.

GENERAL PATHOLOGY AND BACTERIOLOGY

Second Year

GENERAL PATHOLOGY AND BACTERIOLOGY I. This course serves as a foundation for the work in Ocular Pathology. The subject matter covers: general conception and forms of morbid states; nature, extension, and sources of disease; general symptomology, diagnosis, and prognosis; duration, course, and termination of disease; etc. The course in Bacteriology is to acquaint the student with certain fundamental principles of Bacteriology, especially with its effect on body tissues.

GENERAL PATHOLOGY AND BACTERIOLOGY LABORATORY I. The laboratory course gives the student an opportunity to become more familiar with the work given in the classroom through the use of charts and slides.

OCULAR PATHOLOGY

Third and Fourth Years

OCULAR PATHOLOGY I. This course is a comprehensive study of the diseases of the eyeball and its appendages. Relation of diseases of the eye and the general system. The pathology department of the Optometric Clinic is the source of cases presented to the class.

PUBLIC HEALTH OPTOMETRY

Fourth Year

PUBLIC HEALTH. This course is divided into two parts, the first dealing with public hygiene and the second with health education. In the former, consideration is given to the influence and social regulations upon personal and community health. Special attention is paid to lighting.

OPTOMETRIC JURISPRUDENCE

Fourth Year

OPTOMETRIC JURISPRUDENCE. This course covers instructions on legal questions that arise in a professional practice. It also includes the business management of a professional practice.

PHYSIOLOGICAL OPTICS

Third Year

PHYSIOLOGICAL OPTICS I. This course illustrates the relationship between the physiology of the eye as associated with the phenomenon of vision and the optics of all parts of the eye. The course includes: discussion of refractive conditions; accommodation; paraxial optics and Gaussian points; schematic eye; reduced eye and retinal image; axes and angles of the eye; convergence; catoptric images of two orders; ophthalmometry; skiametry; ophthalmoscopy; theories and mechanism of accommodation; astigmatism and cyclo-tropia; aberrations; entoptic phenomena; radiant energy and ocular tissues (biological optics); physico-chemistry of vision.

PHYSIOLOGICAL OPTICS LABORATORY I. This is to accompany Physiological Optics I. A series of experiments on subject matter covered in the classroom. Each student is required to complete all experiments and record the same in the regular laboratory book.

Fourth Year

PHYSIOLOGICAL OPTICS II. This course is a continuation of Physiological Optics I. The material covered includes: physiology of vision including stimuli, sensation characteristics, color mixing, and luminosity curves; sensation of vision including light sense and the Weber-Fechner laws and light difference, color sense—its thresholds and interval, form sense—minimum visible, cognoscible and legible; sensational response; induction including temporal, spatial, and the purkinje phenomena, and after images; anomalies of the visual senses, that is, night blindness, color blindness, and tests; theories of vision; ocular movements including the physiology of the extra-ocular muscles, methods of determining nature of movements, mechanics of the ocular movements, and voluntary and reflex binocular movements; the psychology of vision including the perception of light and color, perception of form and contour, binocular perception and dominance, horopter and aniseikonia, perception of space including

directional mechanisms, postural mechanisms, and bidimensional perception of movement and stroboscopic phenomena (beta movement), phi-phenomenon, delta movement of Korte, erganzende gestaltproduktion, nature of perception; visual efficiency; retinal and ocular images as affected by lens corrections, contact and telescopic lens; physiology of the pupil.

PHYSIOLOGICAL OPTICS LABORATORY II. This course accompanies Physiological Optics II. A series of experiments on subject matter covered in the classroom. Each student is required to complete all experiments and record the same in the regular laboratory book.



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